



PERCEPT

Expand your senses

Battery Replacement Guide

Version 1.1 - February 2023

Replacing a battery pack

The IONODES PERCEPT wearable IoT camera contains a battery pack that can be replaced if required.

Should you determine that your device requires a battery replacement you have the option to return it to IONODES or to perform the replacement procedure yourself. If you opt to replace the battery yourself, you will need to use the parts and tools listed in this document and follow each instruction as described. Battery replacement is a delicate operation which needs to be performed in a dry, dust-free, and ESD-safe environment to maintain the device's integrity and reliability.

Parts and tools required

The PERCEPT Body Camera requires an IONODES-provided battery replacement kit which includes all the parts and tools needed for this operation. The battery replacement kit is sold as an option and can be purchased from most IONODES authorized dealers or distributors.

Contents of the PERCEPT Body Camera Battery Replacement Kit:

Qty	Description
1	Rechargeable Lithium Ion Battery, 6000mAh, 4.35V
6	T8 Torx Drive Screws and Rubber Seals
1	T8 Torx Key L-shaped



A standard Torx T8 mini screwdriver bit is required to change the battery pack on the PERCEPT Body Camera. Your battery replacement kit contains the needed tools for the procedure as well as replacement screws and matching rubber seals.

Before you begin

Before you begin the battery replacement procedure, please ensure that:

- You are working on a flat workspace, with enough room to place the camera, parts and tools.
- You are using ESD-safe surfaces and ESD-protective equipment.
- The device is powered off.

Hardware revision

The PERCEPT Body Camera benefits from continuous improvements, including upgrades in hardware design. Back cover, SIM card location and battery connector were changed starting in hardware revision R4.

Revision R3 or older



- Internal SIM card
- All back cover screws visible
- Serial number's 6th digit from the right is '5' or lower

Revision R4 or newer



- SIM card accessible from snap-in cover
- One (1) back cover screw underneath SIM card snap cover
- Serial number's 6th digit from the right is '6' or higher

Warning: SIM card cover must be properly snapped in to maintain Ingress Protection (IP) rating.

STEP 1 – Removing the back cover

Follow these steps to remove the back cover of your camera to access the battery pack:

1. Make sure the camera is powered **off**.
2. Place the camera and all parts and tools on a flat ESD-safe surface.
3. Hold the camera with one hand, being careful not to press on any button.
4. Using the provided Torx tool, remove all six (6) T8 screws and matching rubber seals holding the back cover in place. For hardware revisions R4 and higher, open the SIM card cover to access one of the screws.



5. Each screw includes a rubber seal ring which needs to be removed with each screw.
6. Set the six (6) screws and six (6) seals aside to be discarded as we will be using new screws and seals to reseal the camera.
7. Gently remove the back cover from the camera body using both hands.

STEP 2 - Removing the battery pack

Follow these steps to remove the battery pack from your camera:

1. Carefully lift the battery pack out of the camera body making sure not to pull on the battery wires and connector which are connected to the internal electronics.

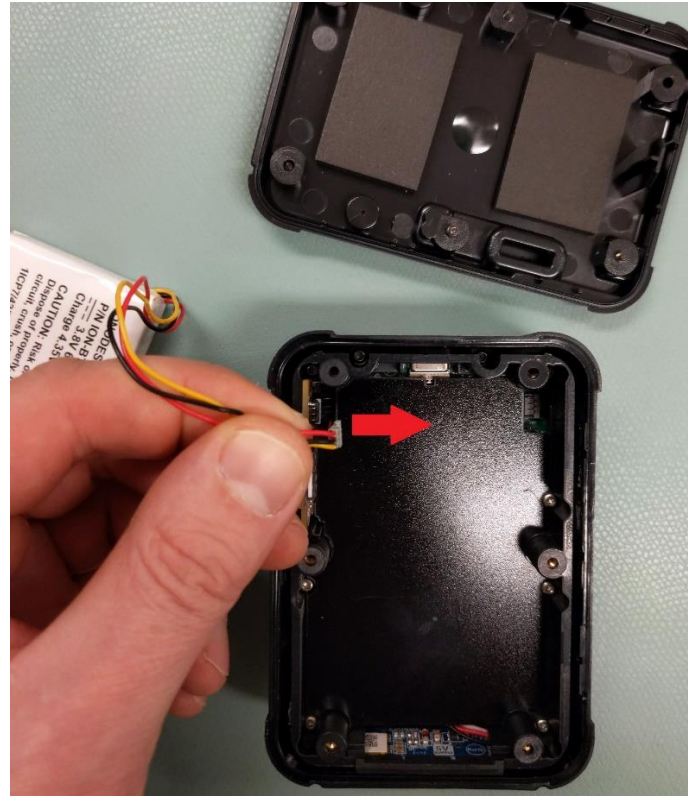


2. Grasp the battery pack wires near the connector and gently pull it STRAIGHT UP to disconnect the battery pack. On hardware revision R4 or newer, the connector is located on the side of the enclosure

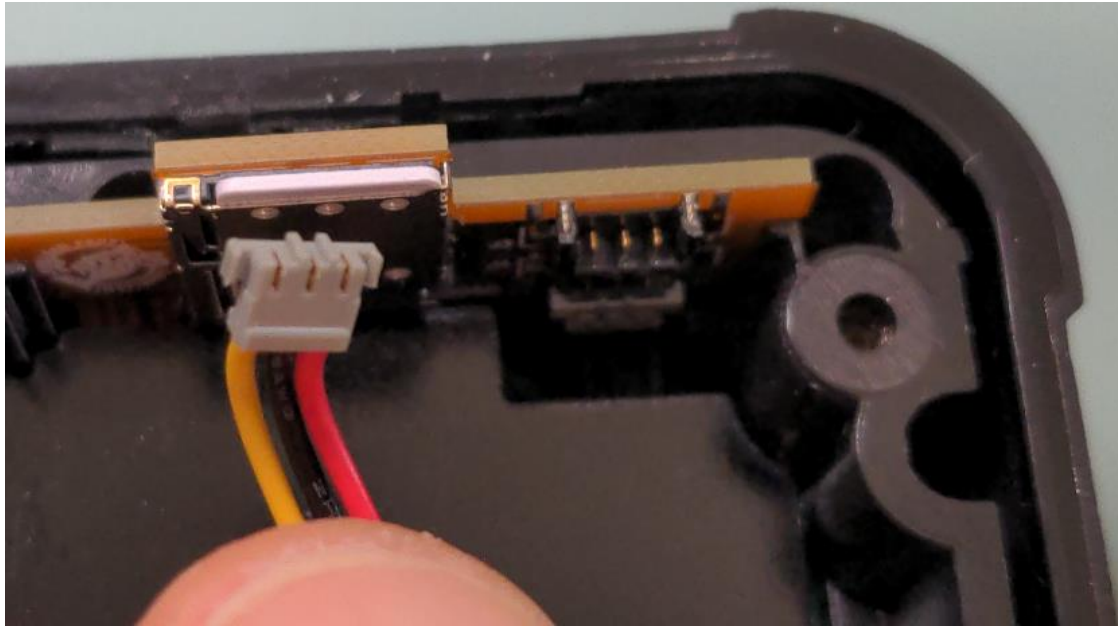
Revision R3 or older -->Pull STRAIGHT UP



Revision R4 or newer-->Pull STRAIGHT from connector



A close-up picture of the cable and PCB connectors is shown below.



3. Set the battery pack aside for later disposal according to your local laws and regulations.

STEP 3 – Connecting the new battery pack

Warning: For safety reasons, only an IONODES-certified replacement battery pack must be installed. Installing any non-approved battery pack will void the device's warranty.

Follow these steps to insert and connect the replacement battery pack in your camera:

1. Grasp the battery pack wires near the connector.

2. Align the cable connector from the new battery pack over the battery connector in the body camera. Press the cable connector towards the board connector to seat it correctly using finger or a plastic instrument (not included).



Revision R4 shown

Align cable connector over camera board connector then press down to seat

Warning: Do not use any metal tool to push down on the connector as this will short-circuit the battery pack.

3. Place the battery pack inside the camera body following the orientation shown in the image below.

- Position the battery wires on the correct side of the battery pack. The wires should not run above or below the battery pack, nor over the flange that seals the back cover (the flange flush with the screw threads) or on the bottom side of the camera (where the USB Type-C port is located). Ensure that the wires are not pinched.

Revision R3 or older



Revision R4 or newer



STEP 4 - Closing the back cover

Follow these steps to close the back cover of the camera and complete the battery replacement procedure:

1. To avoid seal damage when tightening the screws, pre-insert the six new seals in the new screws' threads all-the-way to the head using the provided Torx tool.



2. Verify that the battery cable is properly positioned and will not get pinched by the battery or back cover.
3. Align and place the back cover onto the camera body.
4. Hold the cover in place with your thumb and apply a firm but gentle pressure.
5. Place each of the six **new** (6) screws and accompanying seals provided in the replacement kit. Gradually tighten each screw using a criss-cross pattern to evenly apply pressure on all sides of the cover. For hardware revisions R4 and higher, snap the SIM card cover back in place.

Warning: The screws are designed to stop in place as soon as they have reached the correct depth, do not overtighten the screws beyond that point as this may damage the internal standoffs and rubber seals, and reduce camera enclosure shock resistance.

6. Power on the camera to confirm the battery replacement procedure was successfully completed.

Note: Replacement battery packs are usually provided with a minimal charge which can vary up to 30%. Should the camera not power up, connect the camera to a charging dock or USB charger to charge the replacement battery. A completely drained battery may need to charge for up to 10 minutes before the camera boot process starts and status feedback shows on the OLED screen.

Note: If the battery connector is not properly seated, or its cable is pinched or damaged, the camera may continually reboot by itself every few seconds when connected to a charging dock or USB charger. If this occurs, repeat this procedure (reinstalling the same battery), while ensuring to reseat the connector and reverify the cable is undamaged and properly positioned.
